



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

the sovereignty of one or the other of these laws. The laws may be different, widely different, in themselves, and yet in positions near together each may give a velocity not very different from what the others would have done. Therefore the abrupt change of the law will produce only a gradual change in the velocity of the moving body. This consideration is sufficient to show that the law of continuity is observed, to the exclusion of violent changes in matter. Nevertheless, a mental shock will be occasioned if the law itself shall not appear upon deeper investigation to retain, unbroken and unimpaired, its simplicity and integrity."

---

**Three hundred and fifteenth meeting.**

January 31, 1849. — QUARTERLY MEETING.

The PRESIDENT in the chair.

The Corresponding Secretary read a letter from James Hall, Esq., of Albany, acknowledging the notification of his election as a Fellow of the Academy, and presenting the first volume of his work on the Paleontology of New York.

The Corresponding Secretary also presented from Dr. Bache a copy of his report on the progress of the United States Coast Survey, accompanied by the request that the Academy would submit it to a careful examination, and make such suggestions as might be called for upon the scientific character and value of the survey as now carried on, or which might tend to give greater efficiency to the work. The subject was referred to a committee, consisting of Professor Peirce, Professor Lovering, Mr. Treadwell, and Mr. J. I. Bowditch.

A note from Dr. John Ware, resigning his place on the Rumford Committee, having been read by the President, Mr. Treadwell was appointed to fill this vacancy.

Professor Arnold Guyot, late of Neuchatel, was elected a Fellow of the Academy.

At the request of the committee on the establishment of permanent marks to indicate the water-level on our coast, Lieutenant Davis and Mr. E. C. Cabot were added to the committee.

Mr. Desor exhibited a minute crustacean animal, found in Cochituate water, with a drawing of the same, which he pronounced to be a species of *Calanus*.

---

**Three hundred and sixteenth meeting.**

February 6, 1849. — MONTHLY MEETING.

The VICE-PRESIDENT, Mr. Everett, in the chair.

The Corresponding Secretary read a letter from Professor Arnold Guyot, signifying his acceptance of the Fellowship of the Academy. He also read a communication from Mr. James D. Dana, of New Haven, upon the importance of having a larger edition of the scientific works embodying the results of the United States Exploring Expedition under Captain Wilkes. Whereupon the President was requested to address the Joint Library Committee of Congress, and to call attention to the memorial presented by the Academy upon that subject, on a former occasion.

Professor Peirce, from the committee appointed on that subject, read the following report upon the results of the United States Coast Survey, and it was ordered that a copy thereof be forwarded to Dr. Bache, the Superintendent of the Survey, and another to the Hon. Robert C. Winthrop, Speaker of the House of Representatives.

“The committee of the American Academy of Arts and Sciences, to which were referred the report of the Superintendent of the United States Coast Survey, and the letter of the Superintendent requesting the opinion of the Academy thereupon, respectfully submit the following report.

“The present Superintendent of the Coast Survey of the United States was designated, in 1843, as the proper successor of Mr. Hassler, with extraordinary unanimity, by the science of the whole country. It was believed that his great scientific capacities, nurtured at West Point, and grown to maturity under the most favorable opportunities for development in his own country and during his European travels, united with his admirable judgment and enlarged administrative ability,